

National Weather Service- San Francisco Bay Area

Potential El Nino – 2014 Fact Sheet

Prepared with data from local studies and Climate Prediction Center data

Is an El Nino forecast to develop this summer or fall?

- The Climate Prediction Center has an increasing confidence that El Nino Event may develop later this year in the summer or fall.
- The development of an El Nino event is possible – but not inevitable. Confidence in any possible event will increase as a possible event gets closer.

How high is the confidence of an El Nino actually developing?

- This summer and fall, there is slightly greater than a 50% chance of El Nino developing.
- Each year typically produces a likelihood of about 30% that El Nino will develop, so this year carries an above average likelihood.

If an El Nino develops, how strong will it be?

- It is entirely too early to predict the strength -- especially because it is not certain at this point in time that an El Nino will in fact develop.
- **This is a critical piece of the puzzle for the San Francisco Bay Area. Winter rainfall amounts can vary depending on how strong or weak an El Nino is.**

How is El Nino classified as strong, moderate, or weak?

- A measure called the **Oceanic Nino Index (ONI)** is used to define the strength of El Nino and La Nina events.
- ONI is a 3 month running average of the difference from normal of sea surface temperatures in a specific region of the Pacific Ocean near the Equator.
- El Nino is characterized by above 0 values of ONI (warmer than normal).
- The general breakdown of the strength of El Nino on the Oceanic Nino Index (ONI) is:
 - weak = 0.5 to 0.9
 - moderate = 1.0 to 1.4
 - strong = 1.5 and up

Where can I get general FAQs for El Nino?

- http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/ensostuff/prelude_to_ensofaq.shtml

What is an El Nino Watch? What is CPC's ENSO Alert System?

- All details are summarized here:
http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/enso-alert-readme.shtml

Impacts of El Nino on California:

Will an El Nino event help the CA drought?

- If we transition to El Nino, there is no guarantee it will result in much of an impact to the drought for CA.
- It is mostly **strong El Ninos** that show relationship with increased rain and snow, but that increase is mostly for southern California. The primary reservoirs that help mitigate the drought conditions are located in central and northern California.
- **Weak El Nino does not present a significant relationship to increased precipitation for the state.**

What are the typical conditions expected with El Nino events, for California?

- Looking back at past **El Nino events that were considered strong** (though remember there is no way to determine at this point the strength of any possible El Nino this year) show across the entire state of California:
 - 2009-2010 Split (Below average North, Above average South)
 - 1997-1998 Above average precipitation entire state
 - 1991-1992 Split (Below average North, Above average South)
 - 1982-1983 Above average precipitation entire state
 - 1972-1973 Above average precipitation entire state
 - 1957-1958 Above average precipitation entire state
- There is little to no correlation to increased precipitation for CA during weak to moderate El Nino events.

Local Impacts in the San Francisco Bay Area:

- **In strong El Nino Years:**
 - 2009-2010 Below Normal Bay Area – Above normal south of Bay
 - 1997-1998 Well Above Normal in all areas
 - 1991-1992 Below Normal Bay Area – Near normal south of Bay
 - 1982-1983 Above Normal in all areas
 - 1972-1973 Above Normal in all areas
 - 1957-1958 Above Normal in all areas
- **In Weak El Nino Years:**
 - 1963-64 Below Normal All Areas
 - 1969-70 Above Normal All Areas
 - 1976-77 Below Normal All Areas
 - 1977-78 Above Normal All Areas
 - 1987-88 Below Normal All Areas
 - 2004-05 Above Normal All Areas
 - 2006-07 Below Normal All Areas

Bottom Line:

It is possible an El Nino may develop later this year. The strength is unknown. An El Nino does not guarantee above normal rainfall in the Bay Area – so the possibility of one developing does not mean we don't have to worry anymore about drought! We must wait and see how this possible event develops and how strong it may be.